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EXAMINER

SMITH, SHEILA B

ART UNIT PAPER NUMBER

2681

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14

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/518,678

Applicant(s)

XIN, WAYNE

Examiner

Sheila B. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 13, 14, 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5-12, 16, 17 and 20-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Allowable Subject Matter***

1. The indicated allowability of claims 1,5-12,15-17 and 20-22 are withdrawn in view of the newly discovered reference(s) to 6,580,372. Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5,6,7,20,23-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Watters et al. (U. S. Patent Number 5,982,324) in view of Harris (U. S. Patent Number 6,580,372) and further in view of Fisher et al. (U.S. Patent Number 6,295,455).

***Regarding claim 1***, Watters et al. discloses essentially all the claimed invention as set forth in the instant application, further Watters et al. discloses combining GPS with toa/tdoa of cellular signals to locate terminal, in addition Watters et al. discloses a wireless communication system a location determining system comprising; a first GPS Receiver (1100) in a fixed location relative to base station (which reads on column 2 lines 29-38), exact location coordinates of said first GPS receiver being fixed and predetermined (which reads on 1115), a local error determination module (which reads on DGPS processor) to determine a local error difference

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between a GPS (which reads on location determined by said first GPS receiver (1100) and said predetermined exact location coordinates (which reads on column 19 lines 43-46); a second GPS receiver (1005) in a mobile device (1000), a combiner (which reads on central processor) to combine said local error difference with a GPS location signal determined by said mobile device to provide a location accurate to within a few meters (which reads on column 3 lines 41-44). However, Watters et al. fails to specifically disclose the use of (a) a raw GPS and (b) a transmitter for transmitting said combined value during a telephone call.

In the same field of endeavor, Harris further discloses automatic electronic device detection. In addition Harris discloses (a) the use of raw GPS information as disclosed in column 4 lines 28-30.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with raw GPS information as taught by Harris for the purpose of obtaining the most accurate location information.

Further, in the same field of endeavor, Fisher et al. further discloses methods and arrangements for locating a mobile telecommunications station. In addition Fisher et al. discloses (b) transmitting during a telephone call as disclosed in column 3 lines 24-26.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with transmitter for transmitting combined value during a telephone call as taught by Fisher et al. for the purpose of determining an approximate geographical location of the mobile station.

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**Regarding claims 5, 25, Watters et al.** discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communications system, a wireless communications system, a location determining system wherein satellite positioning system is a GPS system receiver location determining system (1005 ) (which reads on column 19 lines 48-49).

**Regarding claim 6,** Watters et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communications system, a location determining system and a database containing at least one geological correction with respect to a location of said satellite positioning system receiver (disclosed in column 5 lines 30-50.)

**Regarding claim 7,** Watters et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a cellular telephone handset having a navigational satellite system capability; wherein a location determined by said cellular telephone handset is correctable by said difference between said location signal received by said satellite positioning system receiver of said base station and said predetermined location coordinates (which reads on column 19 lines 48-62).

**Regarding claim 20,** Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communication system a location determining system comprising; receiving location information from a navigational satellite System (which reads on column 5 lines 52-67), a first GPS Receiver (1100) in a fixed location relative to base station(which reads on column 2 lines 29-38), exact location coordinates of said first GPS receiver being fixed and predetermined (which reads on 1115), a local error determination module (which reads on DGPS processor) to determine a local error

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difference between a GPS ( which reads on location determined by said first GPS receiver (1100) and said predetermined exact location coordinates (which reads on column 19 lines 43-46); a second GPS receiver (1005) in a mobile device (1000), a combiner (which reads on central processor) to combine said local error difference with a GPS location signal determined by said mobile device to provide a location accurate to within a few meters (which reads on column 3 lines 41-44). However, Watters et al. fails to specifically disclose the use of (a) a raw GPS and (b) a transmitter for transmitting said combined value during a telephone call.

In the same field of endeavor, Harris further discloses automatic electronic device detection. In addition Harris discloses (a) the use of raw GPS information as disclosed in column 4 lines 28-30.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with raw GPS information as taught by Harris for the purpose of obtaining the most accurate location information.

Further, in the same field of endeavor, Fisher et al. further discloses methods and arrangements for locating a mobile telecommunications station. In addition Fisher et al. discloses (b) transmitting during a telephone call as disclosed in column 3 lines 24-26.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with transmitter for transmitting combined value during a telephone call as taught by Fisher et al. for the purpose of determining an approximate geographical location of the mobile station.

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*Regarding claim 23*, Watters et al. discloses essentially all the claimed invention as set forth in the instant application, further Watters et al. discloses combining GPS with toa/tdoa of cellular signals to locate terminal, in addition Watters et al. discloses a wireless communications system comprising: a satellite positioning system receiver (1005 and 1100); a wireless communication front end (which reads on then handset); a combiner (which reads on central processor) to combine said local error difference with a GPS location signal determined by said mobile device to provide a location accurate to within a few meters (which reads on column 3 lines 41-44). However, Watters et al. fails to specifically disclose the use of (a) a raw GPS and (b) a output during a telephone call a final GPS location.

In the same field of endeavor, Harris further discloses automatic electronic device detection. In addition Harris discloses (a) the use of raw GPS information as disclosed in column 4 lines 28-30.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with raw GPS information as taught by Harris for the purpose of obtaining the most accurate location information.

In the same field of endeavor, Fisher et al. further discloses methods and arrangements for locating a mobile telecommunications station. In addition Fisher et al. discloses transmitting during a telephone call as disclosed in column 3 lines 24-26.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass

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with transmitter for transmitting combined value during a telephone call as taught by Fisher et al. for the purpose of determining an approximate geographical location of the mobile station.

**Regarding claims 24**, Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless device, local error difference includes longitude and latitude information location determining system and difference further comprises an altitude difference (disclosed in column 1 lines 26-30 and column 2 lines 55-60.)

**Regarding claim 25**, Watters et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless device wherein satellite positioning system is a GPS system receiver location determining system (1005) (which reads on column 19 lines 48-49).

**Regarding claim 26**, Watters et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless device, a wireless communications front end is a cellular telephone (1010) (which reads on column 19 lines 48-49).

3. Claims 8-10, 15, 21,22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Watters et al. in view of Fisher et al. and further in view of Schipper (U. S. Patent Number 5,986,603).

**Regarding claims 8, 21**, Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communications system, However, Watters et al. fails to specifically disclose a location determining system and difference comprises a longitude difference and a latitude difference.



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In the same field of endeavor, Schipper further discloses geometric utilization of exact solutions of the pseudorange equations. In addition Schipper discloses location determining system and difference comprises a longitude difference and a latitude difference disclosed in column 1 lines 26-30 and column 2 lines 55-60.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. by modifying a different GPS and or glonass with wireless communications capability with a transmitting said highly accurate location information to a called party during an emergency telephone call as taught by Schipper for the purpose of providing for a lookup technique for position location

***Regarding claims 9, 22,*** Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communications system, a location determining system and difference further comprises an altitude difference (disclosed in column 2 lines 11-12.)

***Regarding claim 10,*** Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communication system a location determining system comprising; receiving location information from a navigational satellite System (which reads on column 5 lines 52-67), a first GPS Receiver (1100) in a fixed location relative to base station(which reads on column 2 lines 29-38), exact location coordinates of said first GPS receiver being fixed and predetermined (which reads on 1115), a local error determination module (which reads on DGPS processor) to determine a local error difference between a GPS ( which reads on location determined by said first GPS receiver (1100) and said predetermined exact location coordinates (which reads on column 19 lines 43-46); a

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second GPS receiver (1005) in a mobile device (1000), a combiner (which reads on central processor) to combine said local error difference with a GPS location signal determined by said mobile device to provide a location accurate to within a few meters (which reads on column 3 lines 41-44).

*Regarding claim 15*, Watters et al. in view of Fisher et al. discloses everything claimed, as applied above (see claim 1) additionally, Watters et al. discloses a wireless communication system a location determining system comprising; receiving location information from a navigational satellite System (which reads on column 5 lines 52-67), a first GPS Receiver (1100) in a fixed location relative to base station(which reads on column 2 lines 29-38), exact location coordinates of said first GPS receiver being fixed and predetermined (which reads on 1115), a local error determination module (which reads on DGPS processor) to determine a local error difference between a GPS ( which reads on location determined by said first GPS receiver (1100) and said predetermined exact location coordinates (which reads on column 19 lines 43-46); a second GPS receiver (1005) in a mobile device (1000), a combiner (which reads on central processor) to combine said local error difference with a GPS location signal determined by said mobile device to provide a location accurate to within a few meters (which reads on column 3 lines 41-44).

4. Claims 11,12, 16,17,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watters et al. in view of Fisher et al. and further in view of Schipper (U. S. Patent Number 5,986,603) and further in view of Green Jr. (U. S. Patent Number 5,926,133).

*Regarding claims 11,12, 16,17*, Watters et al. in view of Fisher et al. further in view of Schipper discloses everything claimed, as applied above (see claim 1) however, Watters et al. fails to specifically disclose transmitting said highly accurate location information to a called party during an emergency telephone call.

In the same field of endeavor, Green Jr. further discloses differentially corrected position location system and method for mobile communication networks. In addition Green Jr. discloses transmitting said highly accurate location information to a called party during an emergency telephone call in column 1 lines 26-30 and column 2 lines 55-60.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to improve Watters et al. in view of Fisher et al. further in view of Schipper by modifying a different GPS and or glonass with wireless communications capability with a transmitting said highly accurate location information to a called party during an emergency telephone call as taught by Green Jr. for the purpose of providing for a lookup technique for position location.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheila B. Smith whose telephone number is (703)305-0104. The examiner can normally be reached on Monday-Thursday 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 703-305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Smith  
February 13, 2004

  
ERIKA GARZA  
PATENT EXAMINER